



PUBLICATIONS 2015

BOOKS AND CHAPTERS IN BOOKS, JOURNAL PUBLICATIONS, KEYNOTE AND INVITED LECTURES, CONFERENCE PRESENTATIONS, CONFERENCE PROCEEDINGS

BOOKS AND CHAPTERS IN BOOKS

Armstrong, G. 2015. Supramolecular Polymers (Hydrogen Bonds). In: *Springer Encyclopedia of Polymeric Nanomaterials*, pp.1-10, S. Kobayashi and K. Müllen (editors). ISBN 978-3-642-36199-9 (on-line). Published by Springer Berlin Heidelberg.

De Meatza, I., O. Miguel, I. Cendoya, G-T. Kim, N. Löffler, N. Laszczynski, S. Passerini, P. M. Schweizer, F. Castiglione, A. Mele, G. B. Appetecchi, M. Moreno, M. Brandon, T. Kennedy, E. Mullane, K. M. Ryan, I. Cantero and M. Olive. 2015. GREENLION Project: Advanced Manufacturing Processes for Low Cost Greener Li-Ion Batteries. In: *Electric Vehicle Batteries: Moving from Research Towards Innovation – Reports of the PPP European Green Vehicles Initiative*, pp. 45-60. ISBN: 978-3-319-12705-7. Published by Springer International Publishing.

McCarthy, C. T. and M. A. McCarthy. 2015. Design and Failure Analysis of Composite Bolted Joints for Aerospace Applications. In: *Polymer Composites in the Aerospace Industry*. Book Series: Woodhead Publishing Series in Composites Science and Engineering, issue 50, pp. 295-334. ISBN: 978-0-85709-918-1.

Pembroke, J. T., N. Balakrishnan and P. Armshaw. September 2015. The Potential of the Photoautotroph Synechocystis for Metal Bioremediation. In: *Advances in Bioremediation of Wastewater and Polluted Soil*, pp. 51-72, N. Shiomi (editor), published by InTech. ISBN: 978-953-51-2165-7.

Ryan, M. P., C. C. Adley, P. Armshaw and J. T. Pembroke. December 2015. The Use of ACT as an Educational Tool for Examining the Spread of Antibiotic Resistance. In: *The Battle Against Microbial Pathogens: Basic Science, Technological Advances and Educational Programs*, edited by A. Méndez-Vilas, published by Formatex Research Centre. ISBN: 978-84-942134-7-2.

JOURNAL PUBLICATIONS

Adhikari, S., D. Gilchrist, T. Murmu and M. A. McCarthy. August 2015. Nonlocal Normal Modes in Nanoscale Dynamical Systems. *Mechanical Systems and Signal Processing*, 60-61, pp. 583-603. ISSN: 0888-3270.

Alhalawani, A. M. F., O. Rodriguez, D. J. Curran, R. Co., S. Kieran, S. Arshad, T. J. Keenan, A. W. Wren, G. Crasto, S. A. F. Peel and M. R. Towler. March 2015. A Glass Polyalkenoate Cement Carrier for Bone Morphogenetic Proteins. *Journal of Materials Science – Materials in Medicine*, 26, Article 151, 9 pages. ISSN: 0957-4530.

Ali, S., B. Jonson, M. J. Pomeroy and S. Hampshire. April 2015. Issues Associated with the Development of Transparent Oxynitride Glasses. *Ceramics International*, 41 (3), pp. 3345-3354. ISSN: 0272-8842.

Armshaw, P., D. Carey, C. Sheahan and J. T. Pembroke. December 2015. Utilising the Native Plasmid, pCA2.4, from the Cyanobacterium *Synechocystis* sp. Strain PCC6803 as a Cloning Site for Enhanced Product Production. *Biotechnology for Biofuels*, 8 (1), Article 201, 10 pages. ISSN: 1754-6834.

Armshaw, P. and J. T. Pembroke. February 2015. Examination of the Cell Sensitising Gene *orf43* of ICE R391 Suggests a Role in ICE Transfer Enhancement to Recipient Cells. *FEMS Microbiology Letters*, 362 (4), pp. 1-7. On-line ISSN: 1574-6968.

Armstrong, E. and C. O'Dwyer. June 2015. Artificial Opal Photonic Crystals and Inverse Opal Structures – Fundamentals and Applications from Optics to Energy Storage. *Journal of Materials Chemistry C*, 3 (24), pp. 6109-6143. ISSN: 2050-7526.

Armstrong, G. October 2015. An Introduction to Polymer Nanocomposites. *European Journal of Physics*, 36, Article 063001, 34 pages. ISSN: 0143-0807.

Bachar, A., C. Mercier, A. Tricoteaux, J-C. Hornez, A. Leriche, C. Follet, B. Revel, S. Hampshire and M. R. Towler. March 2015. Effect of Nitrogen on Properties of Na₂O-CaO-SrO-ZnO-SiO₂ Glasses. *Journal of the American Ceramic Society*, 98 (3), pp. 748-757. On-line ISSN: 1551-2916.

Bangert, U. and R. Zan. April 2015. Electronic Functionalisation of Graphene via External Doping and Dosing. *International Materials Reviews*, 60 (3), pp. 133-149. ISSN: 0950-6608.

Barrett, H. E., J. J. Mulvihill, E. M. Cunnane and M. T. Walsh. January 2015. Characterising Human Atherosclerotic Carotid Plaque Tissue Composition and Morphology Using Combined Spectroscopic and Imaging Modalities. *Biomedical Engineering Online*, 14 (Suppl. 1):S5, 13 pages. ISSN: 1475-925X.

Bashar, K., D. A. Healy, S. Elsheikh, L. D. Browne, M. T. Walsh, M. Clarke-Moloney, P. E. Burke, E. G. Kavanagh and S. R. Walsh. March 2015. One-Stage vs. Two-Stage Brachio-Basilic Arteriovenous Fistula for Dialysis Access: A Systematic Review and a Meta-Analysis. *PLOS One*, 10 (3), Article e0120154, 25 pages. ISSN: 1932-6203.

Baskys, A., A. Patel, S. C. Hopkins, V. Kalitka, A. Molodyk and B. A. Glowacki. June 2015. Self-Supporting Stacks of Commercial Superconducting Tape Trapping Fields Up To 1.6T Using Pulsed Field Magnetization. *IEEE Transactions on Applied Superconductivity*, 25 (3), Article 6600304, 4 pages. ISSN: 1051-8223.

Baxendale, I. R., R. D. Braatz, B. K. Hodnett, K. F. Jensen, M. D. Johnson, P. Sharratt, J-P. Sherlock and A. J. Florence. March 2015. Achieving Continuous Manufacturing: Technologies and Approaches for Synthesis, Workup, and Isolation of Drug Substance. *Journal of Pharmaceutical Sciences*, 104 (3), pp. 781-791. On-line ISSN: 1520-6017.

Bergamaschi, E., F. Murphy, C. A. Poland, M. Mullins, A. L. Costa, E. McAlea, L. Tran and S. A. M. Tofail. November/December 2015. Impact and Effectiveness of Risk Mitigation Strategies on the Insurability of Nanomaterial Production: Evidences from Industrial Case Studies. *Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology*, 7 (6), pp. 839-855. On-line ISSN: 1939-0041.

Bezuidenhout, M., T. Kennedy, S. Belochapkine, Y. Guo, E. Mullane, P. A. Kiely and K. M. Ryan. July 2015. High Density and Patternable Growth of Silicon, Germanium and Alloyed SiGe Nanowires by a Rapid Anneal Protocol. *Journal of Materials Chemistry C*, 3 (28), pp. 7455-7462. ISSN: 2050-7526.

- Bhatt, M. D. and C. O'Dwyer. February 2015. Recent Progress in Theoretical and Computational Investigations of Li-ion Battery Materials and Electrolytes. *Phys. Chem. Chem. Phys.*, 17 (7), pp. 4799-4844. ISSN: 1463-9076.
- Bhatt, M. D. and C. O'Dwyer. January 2015. Solid Electrolyte Interphases at Li-ion Battery Graphitic Anodes in Propylene Carbonate (PC)-based Electrolytes Containing FEC, LiBOB, and LiDFOB as Additives. *Chemical Physics Letters*, 618 (2), pp. 208-213. ISSN: 0009-2614.
- Bourke, A., M. A. Miller, R. P. Lynch, J. S. Wainright, R. F. Savinell and D. N. Buckley. May 2015. Effect of Cathodic and Anodic Treatments of Carbon on the Electrode Kinetics of VIV/VV Oxidation-Reduction. *Journal of the Electrochemical Society*, 162 (8), pp. A1547-A1555. ISSN: 0013-4651.
- Boyce, A. and G. Walsh. September 2015. Characterisation of a Novel Thermostable Endoglucanase from *Alicyclobacillus vulcanalis* of Potential Application in Bioethanol Production. *Applied Microbiology and Biotechnology*, 99 (18), pp. 7515-7525. ISSN: 0175-7598.
- Brady, R. T., F. J. O'Brien and D. A. Hoey. March 2015. Mechanically Stimulated Bone Cells Secrete Paracrine Factors that Regulate Osteoprogenitor Recruitment, Proliferation and Differentiation. *Biochemical and Biophysical Research Communications*, 459 (1), pp. 118-123. ISSN: 0006-291X.
- Broderick, S. P., J. G. Houston and M. T. Walsh. October 2015. The Influence of the Instabilities in Modelling Arteriovenous Junction Haemodynamics. *Journal of Biomechanics*, 48 (13), pp. 3600-3607. ISSN: 0021-9290.
- Browne, L. D., K. Bashar, P. Griffin, E. G. Kavanagh, S. R. Walsh and M. T. Walsh. December 2015. The Role of Shear Stress in Arteriovenous Fistula Maturation and Failure: A Systematic Review. *PLOS One*, 10 (12), Article 0145795, 24 pages. ISSN: 1932-6203.
- Browne, L. D., M. T. Walsh and P. Griffin. December 2015. Experimental and Numerical Analysis of the Bulk Flow Parameters Within an Arteriovenous Fistula. *Cardiovascular Engineering and Technology*, 6 (4), pp. 450-462. ISSN: 1869-408X.
- Browne, L. D., P. Griffin, K. Bashar, S. R. Walsh, E. G. Kavanagh and M. T. Walsh. June 2015. *In Vivo* Validation of the *In Silico* Predicted Pressure Drop Across an Arteriovenous Fistula. *Annals of Biomedical Engineering*, 43 (6), pp. 1275-1286. ISSN: 0090-6964.
- Bulushev, D. A., L. G. Bulusheva, S. Beloshapkin, T. O'Connor, A. V. Okotrub and K. M. Ryan. April 2015. Pd Clusters Supported on Amorphous, Low-Porosity Carbon Spheres for Hydrogen Production from Formic Acid. *Applied Materials & Interfaces*, 7 (16), pp. 8719-8726. ISSN: 1944-8244.
- Callery, S. and R. Courtney. December 2015. Assessing Metal Transfer to Vegetation and Grazers on Reclaimed Pyritic Zn and Pb Tailings. *Environmental Science and Pollution Research*, 22 (24), pp. 19764-19772. ISSN: 0944-1344.
- Carson, B. P., W. G. McCormack, C. Conway, J. Cooke, J. Saunders, W. T. O'Connor and P. M. Jakeman. February 2015. An *in vivo* Microdialysis Characterization of the Transient Changes in the Interstitial Dialysate Concentration of Metabolites and Cytokines in Human Skeletal Muscle in Response to Insertion of a Microdialysis Probe. *Cytokine*, 71 (2), pp. 327-333. ISSN: 1043-4666.
- Carucci, C., P. Haltenort, M. Salazar, A. Salis and E. Magner. May 2015. Hofmeister Phenomena in Bioelectrochemistry: The Supporting Electrolyte Affects the Response of Glucose Electrodes. *ChemElectroChem*, 2 (5), pp. 659-663. On-line ISSN: 2196-0216.
- Chen, K.-J., J. J. Perry, H. S. Scott, Q.-Y. Yang and M. J. Zaworotko. August 2015. Double-walled Pyr Topology Networks from a Novel Fluoride-bridged Heptanuclear Metal Cluster. *Chemical Science*, 6 (8), pp. 4784-4789. ISSN: 2041-6539.

Cheuk, D., D. Khamar, P. McArdle and Å. C. Rasmuson. July 2015. Solid Forms, Crystal Habits and Solubility of Danthron. *Journal of Chemical and Engineering Data*, 60 (7), pp. 2110-2118. ISSN: 0021-9568.

Cheuk, D., M. Svärd, C. Seaton, P. McArdle and Å. C. Rasmuson. June 2015. Investigation into Solid and Solution Properties of Quinizarin. *CrystEngComm*, 17 (21), pp. 3985-3997. ISSN: 1466-8033.

Chovan, D., M. Nolan and S. A. M. Tofail. May 2015. First Principles Simulations of Elastic Properties of Radiopaque NiTiPt. *Journal of Alloys and Compounds*, 630, pp. 54-59. ISSN: 0925-8388.

Cogoni, G., B. P. de Souza and P. J. Frawley. December 2015. Particle Size Distribution and Yield Control in Continuous Plug Flow Crystallizers with Recycle. *Chemical Engineering Science*, 138, pp. 592-599. ISSN: 0009-2509.

Cogoni, G. and P. J. Frawley. January 2015. Particle Size Distribution Reconstruction Using a Finite Number of Its Moments Through Artificial Neural Networks: A Practical Application. *Crystal Growth and Design*, 15 (1), pp. 239-246. ISSN: 1528-7483.

Collins, P. E., G. Grassia, A. Colleran, P. A. Kiely, A. Ialenti, P. Maffia and R. J. Carmody. June 2015. Mapping the Interaction of B Cell Leukaemia 3 (BCL-3) and Nuclear Factor κ B (NF- κ B) p50 Identifies a BCL-3-mimetic Anti-inflammatory Peptide. *The Journal of Biological Chemistry*, 290 (25), pp. 15687-15696. ISSN: 0021-9258.

Comer, A. J., D. Ray, W. O. Obande, D. Jones, J. Lyons, I. Rosca, R. M. O'Higgins and M. A. McCarthy. February 2015. Mechanical Characterisation of Carbon Fibre-PEEK Manufactured by Laser-Assisted Automated-Tape-Placement and Autoclave. *Composites Part A: Applied Science and Manufacturing*, 69, pp. 10-20. ISSN: 1359-835X.

Coughlan, C. and K. M. Ryan. September 2015. Complete Study of the Composition and Shape Evolution in the Synthesis of $\text{Cu}_2\text{ZnSnS}_4$ (CZTS) Semiconductor Nanocrystals. *CrystEngComm*, 17 (36), pp. 6914-6922. ISSN: 1466-8033.

Croker, D. M., D. M. Kelly, D. E. Horgan, B. K. Hodnett, S. E. Lawrence, H. A. Moynihan and Å. C. Rasmuson. December 2015. Demonstrating the Influence of Solvent Choice and Crystallization Conditions on Phenacetin Crystal Habit and Particle Size Distribution. *Organic Process Research and Development*, 19 (12), pp. 1826-1836. ISSN: 1083-6160.

Cunnane, E. M., J. J. Mulvihill, H. E. Barrett and M. T. Walsh. January 2015. Simulation of Human Atherosclerotic Femoral Plaque Tissue: The Influence of Plaque Material Model on Numerical Results. *Biomedical Engineering Online*, 14 (Suppl. 1):S7, 12 pages. ISSN: 1475-925X.

Cunnane, E. M., J. J. E. Mulvihill, H. E. Barrett, D. A. Healy, E. G. Kavanagh, S. R. Walsh and M. T. Walsh. January 2015. Mechanical, Biological and Structural Characterization of Human Atherosclerotic Femoral Plaque Tissue. *Acta Biomaterialia*, 11, pp. 295-303. ISSN: 1742-7061.

Davis, N. F., R. O. C. Mooney, C. V. Cunnane, E. M. Cunnane, J. A. Thornhill and M. T. Walsh. October 2015. Preventing Urethral Trauma by Inadvertent Inflation of Catheter Balloon within the Urethra During Catheterisation: Evaluation of a Novel Safety Syringe After Correlating Trauma with Urethral Distension and Catheter Balloon Pressure. *The Journal of Urology*, 194 (4), pp. 1138-1145. ISSN: 0022-5347.

Davis, N. F., R. O. C. Mooney, M. F. O'Brien and M. T. Walsh. June 2015. Attitudes Among Junior Doctors Towards Improving the Transurethral Catheterisation Process. *Irish Journal of Medical Science*, 184 (2), pp. 365-367. ISSN: 0021-1265.

- Dexter, J., P. Armshaw, C. Sheahan and J. T. Pembroke. July 2015. The State of Autotrophic Ethanol Production in Cyanobacteria. *Journal of Applied Microbiology*, 119 (1), pp. 11-24. ISSN: 1364-5072.
- Dolekcekic, E., M. J. Pomeroy and S. Hampshire. January 2015. B-Phase Solid Solutions in Er- and Y-SiAlON Glass-ceramics. *Journal of Materials Science*, 50 (1), pp. 299-312. ISSN: 0022-2461.
- Dowling, C. M. and P. A. Kiely. 2015. Targeting Protein Kinase C Downstream of Growth Factor and Adhesion Signalling. *Cancers*, 7 (3), pp. 1271-1291. ISSN: 2072-6694.
- Douglas, P., A. B. Albadarin, A. H. Al-Muhtaseb, C. Mangwandi and G. M Walker. May 2015. Thermo-mechanical Properties of Poly ϵ -caprolactone/poly L-lactic Acid Blends: Addition of Nalidixic Acid and Polyethylene Glycol Additives. *Journal of the Mechanical Behavior of Biomedical Materials*, 45, pp. 154-165. ISSN: 1751-6161.
- Duggirala, N. K., G. P. F. Wood, A. Fischer, Ł. Wojtas, M. L. Perry and M. J. Zaworotko. September 2015. Hydrogen Bond Hierarchy: Persistent Phenol...Chloride Hydrogen Bonds in the Presence of Carboxylic Acid Moieties. *Crystal Growth and Design*, 15 (9), pp. 4341-4354. ISSN: 1528-7483.
- Dussan, K., B. Girisuta, M. Lopes, J. J. Leahy and M. H. B. Hayes. April 2015. Conversion of Hemicellulose Sugars Catalyzed by Formic Acid: Kinetics of the Dehydration of D-Xylose, L-Arabinose and D-Glucose. *ChemSusChem*, 8 (8), pp. 1411-1428. On-line ISSN: 1864-564X.
- Egan, B., M. A. McCarthy, R. M. Frizzell and C. T. McCarthy. December 2015. Finite Element Analysis of Catastrophic Failure of Dynamically-loaded Countersunk Composite Fuselage Joints. *Composite Structures*, 133, pp. 1198-1208. ISSN: 0263-8223.
- Elsaidi, S. K., M. H. Mohamed, H. T. Schaefer, A. Kumar, M. Lusi, T. Pham, K. A. Forrest, B. Space, W. Xu, G. J. Halder, J. Liu, M. J. Zaworotko and P. K. Thallapally. November 2015. Hydrophobic Pillared Square Grids for Selective Removal of CO₂ from Simulated Flue Gas. *Chemical Communications*, 51 (85), pp. 15530-15533. ISSN: 1359-7345.
- English, A., A. Azeem, K. Spanoudes, E. Jones, B. Tripathi, N. Basu, K. McNamara, S. A. M. Tofail, N. Rooney, G. Riley, A. O'Riordan, G. Cross, D. Hutmacher, M. Biggs, A. Pandit and D. I. Zeugolis. December 2015. Data on *in vitro* and *in vivo* Cell Orientation on Substrates with Different Topographies. *Data in Brief*, 5, pp. 379-382. ISSN: 2352-3409.
- English, A., A. Azeem, K. Spanoudes, E. Jones, B. Tripathi, N. Basu, K. McNamara, S. A. M. Tofail, N. Rooney, G. Riley, A. O'Riordan, G. Cross, D. Hutmacher, M. Biggs, A. Pandit and D. I. Zeugolis. November 2015. Substrate Topography: A Valuable *in vitro* Tool, but a Clinical Red Herring for *in vivo* Tenogenesis. *Acta Biomaterialia*, 27, pp. 3-12. ISSN: 1742-7061.
- Fernandez-Yague, M. A., A. Larrañaga, O. Gladkovskaya, A. Stanley, G. Tadayyon, Y. Guo, J-R. Sarasua, S. A. M. Tofail, D. I. Zeugolis, A. Pandit and M. J. Biggs. October 2015. Effects of Polydopamine Functionalization on Boron Nitride Nanotube Dispersion and Cytocompatibility. *Bioconjugate Chemistry*, 26 (10), pp. 2025-2037. ISSN: 1043-1802.
- Flannelly, T., S. Dooley and J. J. Leahy. November 2015. Reaction Pathway Analysis of Ethyl Levulinate and 5-Ethoxymethylfurfural from D-Fructose Acid Hydrolysis in Ethanol. *Energy & Fuels*, 29 (11), pp. 7554-7565. ISSN: 0887-0624.
- Forsberg, K. M. and Å. C. Rasmuson. August 2015. The Influence of Hydrofluoric Acid and Nitric Acid on the Growth Kinetics of Iron(III) Fluoride Trihydrate. *Journal of Crystal Growth*, 423, pp. 16-21. ISSN: 0022-0248.

Gao, W-Y., R. Cai, T. Pham, K. A. Forrest, A. Hogan, P. Nugent, K. Williams, L. Wojtas, R. Luebke, L. J. Weseliński, M. J. Zaworotko, B. Space, Y-S. Chen, M. Eddaoudi, X. Shi and S. Ma. March 2015. Remote Stabilization of Copper Paddlewheel Based Molecular Building Blocks in Metal-organic Frameworks. *Chemistry of Materials*, 27 (6), pp. 2144-2151. ISSN: 0897-4756.

Geaney, H. and C. O'Dwyer. March 2015. Electrochemical Investigation of the Role of MnO₂ Nanorod Catalysts in Water Containing and Anhydrous Electrolytes for Li-O₂ Battery Applications. *Phys. Chem. Chem. Phys.*, 17 (10), pp. 6748-6759. ISSN: 1463-9076.

Gill, E., P. Liu and K. M. Ryan. 2015. Insights into the Electrophoretic Deposition of Colloidal II-VI Nanorods: Optimization for Vertically and Horizontally Aligned Assemblies. *Journal of the Electrochemical Society*, 162 (11), pp. D3019-D3024. ISSN: 0013-4651.

Glocheux, Y., A. B. Albadarin, C. Mangwandi, E. Stewart and G. M. Walker. May 2015. Production of Porous Aluminium and Iron Sulphated Oxyhydroxides Using Industrial Grade Coagulants for Optimised Arsenic Removal From Groundwater. *Journal of Industrial and Engineering Chemistry*, 25, pp. 56-66. ISSN: 1226-086X.

Glowacki, B. A., W. J. Nuttall, E. Hanley, L. Kennedy and D. O'Flynn. February 2015. Hydrogen Cryomagnetism for Decentralised Energy Management and Superconductivity. *Journal of Superconductivity and Novel Magnetism*, 28 (2), pp. 561-571. ISSN: 1557-1939.

Glynn, C., D. Creedon, H. Geaney, E. Armstrong, T. Collins, M. A. Morris and C. O'Dwyer. June 2015. Linking Precursor Alterations to Nanoscale Structure and Optical Transparency in Polymer Assisted Fast-Rate Dip-Coating of Vanadium Oxide Thin Films. *Scientific Reports*, 5, Article 11574, 15 pages. On-line ISSN: 2045-2322.

Grams, J., M. Niewiadomski, A. M. Ruppert and W. Kwapiński. November 2015. Catalytic Performance of a Ni Catalyst Supported on CeO₂, ZrO₂ and CeO₂-ZrO₂ in the Upgrading of Cellulose Fast Pyrolysis Vapors. *Comptes Rendus Chimie*, 18 (11), pp. 1223-1228. ISSN: 1631-0748.

Gregor, M., T. Plecenik, S. A. M. Tofail, M. Zahoran, M. Truchly, M. Vargova, F. Laffir, G. Plesch, P. Kus and A. Plecenik. May 2015. Hydrophobicity of Electron Beam Modified Surface of Hydroxyapatite Films. *Applied Surface Science*, 337, pp. 249-253. ISSN: 0169-4332.

Hanley, E. S., B. A. Glowacki, W. J. Nuttall, N. Kazantzis. March 2015. Natural Gas – Synergies with Hydrogen. *Proceedings of the ICE – Energy*, 168 (1), pp. 47-60. ISSN: 1751-4223.

Hardiman, M., T. J. Vaughan and C. T. McCarthy. January 2015. Fibrous Composite Matrix Characterisation Using Nanoindentation: The Effect of Fibre Constraint and the Evolution from Bulk to In-situ Matrix Properties. *Composites Part A: Applied Science and Manufacturing*, 68, pp. 296-303. ISSN: 1359-835X.

Hayes, D. J. M., M. H. B. Hayes and J. J. Leahy. June 2015. Analysis of the Lignocellulosic Components of Peat Samples with Development of Near Infrared Spectroscopy Models for Rapid Quantitative Predictions. *Fuel*, 150, pp. 261-268. ISSN: 0016-2361.

Hertelé, S., N. O'Dowd, K. Van Minnebruggen, M. Verstraete and W. De Waele. December 2015. Fracture Mechanics Analysis of Heterogeneous Welds: Numerical Case Studies Involving Experimental Heterogeneity Patterns. *Engineering Failure Analysis*, 58 (2), pp. 336-350. ISSN: 1350-6307.

Hester, K., M. Mullins, F. Murphy and S. A. M. Tofail. August 2015. Anticipatory Ethics and Governance (AEG): Towards a Future Care Orientation Around Nanotechnology. *NanoEthics*, 9 (2), pp. 123-136. ISSN: 1871-4757.

- Imar, S., M. Yaqub, C. Maccato, C. Dickinson, F. Laffir, M. Vagin and T. McCormac. December 2015. Nitrate and Nitrite Electrocatalytic Reduction at Layer-by-Layer Films Composed of Dawson-type Heteropolyanions Mono-substituted with Transitional Metal Ions and Silver Nanoparticles. *Electrochimica Acta*, 184, pp. 323-330. ISSN: 0013-4686.
- Imar, S., C. Maccato, C. Dickinson, F. Laffir, M. Vagin and T. McCormac. March 2015. Enhancement of Nitrite and Nitrate Electrocatalytic Reduction Through the Employment of Self-assembled Layers of Nickel- and Copper-substituted Crown-type Heteropolyanions. *Langmuir*, 31 (8), pp. 2584-2592. ISSN: 0743-7463.
- Jarvis, S. P., S. Taylor, J. D. Baran, D. Thompson, A. Saywell, B. Mangham, N. R. Champness, J. A. Larsson and P. Moriarty. December 2015. Physisorption Controls the Conformation and Density of States of an Adsorbed Porphyrin. *The Journal of Physical Chemistry C*, 119 (50), pp. 27982-27994. ISSN: 1932-7447.
- Jiang, L., C. S. Suchand Sangeeth, L. Yuan, D. Thompson and C. A. Nijhuis. October 2015. One-nanometer Thin Monolayers Remove the Deleterious Effect of Substrate Defects in Molecular Tunnel Junctions. *Nano Letters*, 15 (10), pp. 6643-6649. ISSN: 1530-6984.
- Katnam, K. B., A. J. Comer, D. Roy, L. F. M. da Silva and T. M. Young. January 2015. Composite Repair in Wind Turbine Blades: An Overview. *Journal of Adhesion*, 91 (1-2), pp. 113-139. ISSN: 0021-8464.
- Kepaptsoglou, D., T. P. Hardcastle, C. R. Seabourne, U. Bangert, R. Zan, J. A. Amani, H. Hofsäss, R. J. Nicholls, R. M. D. Brydson, A. J. Scott and Q. M. Ramasse. November 2015. Electronic Structure Modification of Ion Implanted Graphene: The Spectroscopic Signatures of p- and n- Type Doping. *ACS Nano*, 9 (11), pp. 11398-11407. ISSN: 1936-0851.
- Kennedy, T., M. Bezuidenhout, K. Palaniappan, K. Stokes, M. Brandon and K. M. Ryan. July 2015. Nanowire Heterostructures Comprising Germanium Stems and Silicon Branches as High-Capacity Li-Ion Anodes with Tunable Rate Capability. *ACS Nano*, 9 (7), pp. 7456-7465. ISSN: 1936-0851.
- Kiely, M., S. J. Hodgins, B. A. Merrigan, S. Tormey, P. A. Kiely and E. M. O'Connor. August 2015. Real Time Cell Analysis of the Inhibitory Effect of Vitamin K₂ on Adhesion and Proliferation of Breast Cancer Cells. *Nutrition Research*, 35 (8), pp. 736-743. ISSN: 0271-5317.
- Kiely, M. and P. A. Kiely. April 2015. PP2A: The Wolf in Sheep's Clothing? *Cancers*, 7 (2), pp. 648-669. ISSN: 2072-6694.
- Kok, M., J. G. Smith Jr., C. J. Wohl, E. J. Siochi and T. M. Young. May 2015. Critical Considerations in the Mitigation of Insect Residue Contamination on Aircraft Surfaces – A Review. *Progress in Aerospace Sciences*, 75, pp. 1-14. ISSN: 0376-0421.
- Kolaj-Robin, O., D. Russell, K. A. Hayes, J. T. Pembroke and T. Soulimane. May 2015. Cation Diffusion Facilitator Family: Structure and Function. *FEBS Letters*, 589 (12), pp. 1283-1295. ISSN: 0014-5793.
- Koutsoupakis, C., T. Soulimane and C. Varotsis. March 2015. Photobiochemical Production of Carbon Monoxide by *Thermus thermophilus* ba₃-Cytochrome c Oxidase. *Chemistry – A European Journal*, 21 (13), pp. 4958-4961. On-line ISSN: 1521-3765.
- Kumar, A., D. G. Madden, M. Lusi, K-J. Chen, E. A. Daniels, T. Curtin, J. J. Perry and M. J. Zaworotko. November 2015. Direct Air Capture of CO₂ by Physisorbent Materials. *Angewandte Chemie International Edition*, 54 (48), pp. 14372-14377. On-line ISSN: 1521-3773.

Kwapinska, M., G. Xue, A. Horvat, L. P. L. M. Rabou, S. Dooley, W. Kwapinski and J. J. Leahy. November 2015. Fluidized Bed Gasification of Torrefied and Raw Grassy Biomass (*Miscanthus x giganteus*). The Effect of Operating Conditions on Process Performance. *Energy & Fuels*, 29 (11), pp. 7290-7300. ISSN: 0887-0624.

Lekawa-Raus, A., K. Walczak, G. Kozlowski, S. C. Hopkins, M. Wozniak, B. A. Glowacki and K. Koziol. September 2015. Low Temperature Electrical Transport in Modified Carbon Nanotube Fibres. *Scripta Materialia*, 106, pp. 34-37. ISSN: 1359-6462.

Lekawa-Raus, A., L. Kurzepa, G. Kozlowski, S. C. Hopkins, M. Wozniak, D. Lukawski, B. A. Glowacki and K. K. Koziol. June 2015. Influence of Atmospheric Water Vapour on Electrical Performance of Carbon Nanotube Fibres. *Carbon*, 87, pp. 18-28. ISSN: 0008-6223.

Li, Y., L. M. Placek, A. Coughlan, F. R. Laffir, D. Pradham, N. P. Mellott and A. W. Wren. February 2015. Investigating the Influence of Na^+ and Sr^{2+} on the Structure and Solubility of $\text{SiO}_2\text{-TiO}_2\text{-CaO-Na}_2\text{O/SrO}$ Bioactive Glass. *Journal of Materials Science – Materials in Medicine*, 26, Article 85, 12 pages. ISSN: 0957-4530.

Liu, J., M. Svärd and Å. C. Rasmuson. September 2015. Influence of Agitation on Primary Nucleation in Stirred Tank Crystallizers. *Crystal Growth and Design*, 15 (9), pp. 4177-4184. ISSN: 1528-7483.

Liu, J., M. Svärd, P. Hippen and Å. C. Rasmuson. July 2015. Solubility and Crystal Nucleation in Organic Solvents of Two Polymorphs of Curcumin. *Journal of Pharmaceutical Sciences*, 104 (7), pp. 2183-2189. On-line ISSN: 1520-6017.

Liu, Y., Z. Li, J. J. Leahy and W. Kwapinski. June 2015. Catalytically Upgrading Bio-Oil Via Esterification. *Energy & Fuels*, 29 (6), pp. 3691-3698. ISSN: 0887-0624.

Loullis, A., M. R. Noor, T. Soulimane and E. Pinakoulaki. January 2015. The Structure of a Ferrous Heme-nitro Species in the Binuclear Heme a_3/Cu_B Center of ba_3 -cytochrome c Oxidase as Determined by Resonance Raman Spectroscopy. *Chemical Communications*, 51 (2), pp. 286-289. ISSN: 1359-7345.

Lusi, M., I. J. Vitorica-Yrezabal and M. J. Zaworotko. August 2015. Expanding the Scope of Molecular Mixed Crystals Enabled by Three Component Solid Solutions. *Crystal Growth and Design*, 15 (8), pp. 4098-4103. ISSN: 1528-7483.

Malsch, I., V. Subramanian, E. Semenzin, D. Hristozov, A. Marcomini, M. Mullins, K. Hester, E. McAlea, F. Murphy and S. A. M. Tofail. May 2015. Empowering Citizens in International Governance of Nanotechnologies. *Journal of Nanoparticle Research*, 17 (5), Article 215, 19 Pages. ISSN: 1388-0764.

Mangwandi, C., L. JiangTao, A. B. Albadarin, R. M. Dhenge and G. M. Walker. January 2015. High Shear Granulation of Binary Mixtures: Effect of Powder Composition on Granule Properties. *Powder Technology*, 270, Part B, pp. 424-434. ISSN: 0032-5910.

Marassi, V., S. Casolari, B. Roda, A. Zattoni, P. Reschiglian, S. Panzavolta, T. Syed, S. Ortelli, C. Delpivo, M. Blosi and A. L. Costa. March 2015. Hollow-fiber Flow Field-flow Fractionation and Multi-angle Light Scattering Investigation of the Size, Shape and Metal-release of Silver Nanoparticles in Aqueous Medium for Nano-risk Assessment. *Journal of Pharmaceutical and Biomedical Analysis*, 106, pp. 92-99. ISSN: 0731-7085.

Mealey, D., J. Zeglinski, D. Khamar and Å. C. Rasmuson. July 2015. Influence of Solvent on Crystal Nucleation of Risperidone. *Faraday Discussions*, 179, pp. 309-328. ISSN: 1359-6640.

Mealey, D., D. M. Croker and Å. C. Rasmuson. June 2015. Crystal Nucleation of Salicylic Acid in Organic Solvents. *CrystEngComm*, 17 (21), pp. 3961-3973. ISSN: 1466-8033.

Mehrvar, C., D. J. Curran, A. M. F. Alhalawani, D. Boyd and M. R. Towler. March 2015. Comparative Study of Weibull Characteristic Strength and Mean Strength of GPCs to Confirm the Minimum Number of Samples Needed for Confident Strength Reporting. *Journal of the Mechanical Behavior of Biomedical Materials*, 43, pp. 53-58. ISSN: 1751-6161.

Mirza, Z., J. Liu, Y. Glocheux, A. B. Albadarin, G. M. Walker and C. Mangwandi. December 2015. Effect of Impeller Design on Homogeneity, Size and Strength of Pharmaceutical Granules Produced by High-Shear Wet Granulation. *Particuology*, 23, pp. 31-39. ISSN: 1674-2001.

Mohammadi, M., K. Forsberg, L. Kloo, J. M. De La Cruz and Å. C. Rasmuson. July 2015. Separation of ND(III), DY(III) and Y(III) by Solvent Extraction Using D2EHPA and EHEHPA. *Hydrometallurgy*, 156, pp. 215-224. ISSN: 0304-386X.

Monteverde, U., J. Pal, M. A. Migliorato, M. Missous, U. Bangert, R. Zan, R. Kashtiban and D. Powell. September 2015. Under Pressure: Control of Strain, Phonons and Bandgap Opening in Rippled Graphene. *Carbon*, 91, pp. 266-274. ISSN: 0008-6223.

Mullane, E., H. Geaney and K. M. Ryan. March 2015. Synthesis of Silicon-germanium Axial Nanowire Heterostructures in a Solvent Vapor Growth System Using Indium and Tin Catalysts. *Phys. Chem. Chem. Phys.*, 17 (10), pp. 6919-6924. ISSN: 1463-9076.

McAuliffe, M. A. P., G. E. O'Mahony, C. A. Blackshields, J. A. Collins, D. P. Egan, L. Kiernan, E. O'Neill, S. Lenihan, G. M. Walker and A. M. Crean. January 2015. The Use of PAT and Off-line Methods for Monitoring of Roller Compacted Ribbon and Granule Properties with a View to Continuous Processing. *Organic Process Research and Development*, 19 (1), pp. 158-166. ISSN: 1083-6160.

McNamara, K. and S. A. M. Tofail. November 2015. Nanosystems: The Use of Nanoalloys, Metallic, Bimetallic, and Magnetic Nanoparticles in Biomedical Applications. *Phys. Chem. Chem. Phys.*, 17 (42), pp. 27981-27995. ISSN: 1463-9076.

McNamara, K., O. Kolaj-Robin, S. Belochapkine, F. Laffir, A. A. Gandhi and S. A. M. Tofail. August 2015. Surface Chemistry and Cytotoxicity of Reactively Sputtered Tantalum Oxide Films on NiTi Plates. *Thin Solid Films*, 589, pp. 1-7. ISSN: 0040-6090.

Naseer, R., S. Sankar Mal, U. Kortz, G. Armstrong, F. Laffir, C. Dickinson, M. Vagin and T. McCormac. September 2015. Electrocatalysis by Crown-type Polyoxometalates Multi-substituted by Transition Metal Ions; Comparative Study. *Electrochimica Acta*, 176, pp. 1248-1255. ISSN: 0013-4686.

Nash, N. H., T. M. Young, P. T. McGrail and W. F. Stanley. November 2015. Inclusion of a Thermoplastic Phase to Improve Impact and Post-Impact Performances of Carbon Fibre Reinforced Thermosetting Composites – A Review. *Materials and Design*, 85, pp. 582-597. ISSN: 0264-1275.

Nash, N. H., D. Ray, T. M. Young and W. F. Stanley. September 2015. The Influence of Hydrothermal Conditioning on the Mode-I, Thermal and Flexural Properties of Carbon/Benzoxazine Composites with a Thermoplastic Toughening Interlayer. *Composites: Part A*, 76, pp. 135-144. ISSN: 1359-835X.

Nash, C., Y. Spiesschaert, G. Amarandei, Z. Stoeva, R. I. Tomov, D. Tonchev, I. Van Driessche and B. A. Glowacki. January 2015. A Comparative Study on the Conductive Properties of Coated and Printed Silver Layers on a Paper Substrate. *Journal of Electronic Materials*, 44 (1), pp. 497-510. ISSN: 0361-5235.

Naveena, B., P. Armshaw and J. T. Pembroke. December 2015. Ultrasonic Intensification as a Tool for Enhanced Microbial Biofuel Yields. *Biotechnology for Biofuels*, 8 (1), Article 140, 13 pages. ISSN: 1754-6834.

- Nawrocki, G., P-A. Cazade, D. Thompson and M. Cieplak. October 2015. Peptide Recognition Capabilities of Cellulose in Molecular Dynamics Simulations. *The Journal of Physical Chemistry C*, 119 (43), pp. 24404-24416. ISSN: 1932-7447.
- Nerngchamng, N., D. Thompson, L. Cao, L. Yuan, L. Jiang, M. Roemer and C. A. Nijhuis. September 2015. Nonideal Electrochemical Behavior of Ferrocenyl-Alkanethiolate SAMs Maps the Microenvironment of the Redox Unit. *The Journal of Physical Chemistry C*, 119 (38), pp. 21978-21991. ISSN: 1932-7447.
- Nicolaides, A., T. Soulimane and C. Varotsis. March 2015. Detection of Functional Hydrogen-bonded Water Molecules with Protonated/deprotonated Key Carboxyl Side Chains in the Respiratory Enzyme ba₃-oxidoreductase. *Phys. Chem. Chem. Phys.*, 17 (12), pp. 8113-8119. ISSN: 1463-9076.
- Nirmalraj, P. N., D. Thompson and H. E. Riel. May 2015. Capturing the Embryonic Stages of Self-assembly – Design Rules for Molecular Computation. *Scientific Reports*, Article 10116, 9 pages. On-line ISSN: 2045-2322.
- Ohta, T., T. Soulimane, T. Kitagawa and C. Varotsis. April 2015. Nitric Oxide Activation by *caa*₃ Oxidoreductase from *Thermus thermophilus*. *Physical Chemistry Chemical Physics*, 17 (16), pp. 10894-10898. ISSN: 1463-9076.
- O'Donovan, K., D. Ray and M. A. McCarthy. February 2015. Toughening Effects of Interleaved Nylon Veils on Glass Fabric/Low-Styrene-Emission Unsaturated Polyester Resin Composites. *Journal of Applied Polymer Science*, 132 (7), Article Number 41462, 9 pages. ISSN: 0021-8995.
- O'Connor Mooney, R., A. V. Piterina, N. F. Davis, T. M. McGloughlin and M. T. Walsh. May 2015. Automatic Decellularization of Ovine Aorta-Derived Extracellular Matrix Offers Reduced Processing and Attendee Times While Being as Effective as Manual Techniques. *Tissue Engineering Part C: Methods*, 21 (5), pp. 480-488. ISSN: 1937-3384.
- O'Connor, W. T. and S. D. O'Shea. June 2015. Clozapine and GABA Transmission in Schizophrenia Disease Models Establishing Principles to Guide Treatments. *Pharmacology & Therapeutics*, 150, pp. 47-80. ISSN: 0163-7258.
- O'Leary, S. A., J. J. Mulvihill, H. E. Barrett, E. G. Kavanagh, M. T. Walsh, T. M. McGloughlin and B. J. Doyle. February 2015. Determining the Influence of Calcification on the Failure Properties of Abdominal Aortic Aneurysm (AAA) Tissue. *Journal of the Mechanical Behavior of Biomedical Materials*, 42 pp. 154-167. ISSN: 1751-6161.
- O'Reilly, E. J., P. J. Conroy, S. Hearty, T. E. Keyes, R. O'Kennedy, R. J. Forster and L. Dennany. 2015. Electrochemiluminescence Platform for the Detection of C-Reactive Proteins: Application of Recombinant Antibody Technology to Cardiac Biomarker Detection. *RSC Advances*, 83 (5), pp. 67874-67877. ISSN: 2046-2069.
- Padmanathan, N., S. Selladurai, K. Mani Rahulan, C. O'Dwyer and K. M. Razeeb. September 2015. NiO Hybrid Nanoarchitecture-based Pseudocapacitor in Organic Electrolyte with High Rate Capability and Cycle Life. *Ionics*, 21 (9), pp. 2623-2631. ISSN: 0947-7047.
- Page, A. G., A. Patel, A. Baskys, S. C. Hopkins, V. Kalitka, A. Molodyk and B. A. Glowacki. August 2015. The Effect of Stabilizer on the Trapped Field of Stacks of Superconducting Tape Magnetized by a Pulsed Field. *Superconductor Science and Technology*, 28 (8), Article 085009, 7 pages. ISSN: 0953-2048.
- Pandey, D. S., I. Pan, S. Das, J. J. Leahy and W. Kwapinski. March 2015. Multi-gene Genetic Programming Based Predictive Models for Municipal Solid Waste Gasification in a Fluidized Bed Gasifier. *Bioresource Technology*, 179, pp. 524-533. ISSN: 0960-8524.

- Parise, L. F. S., C. Ruggieri and N. P. O'Dowd. August 2015. Fully-plastic Strain-based J Estimation Scheme for Circumferential Surface Cracks in Pipes Subjected to Reeling. *Journal of Pressure Vessel Technology*, 137 (4), Article 041204, 8 pages. ISSN: 0094-9930.
- Patel, A., S. C. Hopkins, A. Baskys, V. Kalitka, A. Molodyk and B. A. Glowacki. September 2015. Magnetic Levitation Using High Temperature Superconducting Pancake Coils as Composite Bulk Cylinders. *Superconductor Science and Technology*, 28 (11), Article 115007, 10 pages. ISSN: 0953-2048.
- Patel, A., A. Baskys, S. C. Hopkins, V. Kalitka, A. Molodyk and B. A. Glowacki. June 2015. Pulsed Field Magnetization of Superconducting Tape Stacks for Motor Applications. *IEEE Transactions on Applied Superconductivity*, 25 (3), Article 5203405, 5 pages. ISSN: 1051-8223.
- Patel, A., A. Usoskin, A. Baskys, S. C. Hopkins and B. A. Glowacki. February 2015. Trapped Field Profiles for 40-mm Wide Superconducting Tape Pieces. *Journal of Superconductivity and Novel Magnetism*, 28 (2), pp. 397-401. ISSN: 1557-1939.
- Pépin, A., T. Tkaczyk, N. O'Dowd and K. Nikbin. October 2015. Methodology for Assessment of Surface Defects in Undermatched Pipeline Girth Welds. *Journal of Pressure Vessel Technology*, 137, Article 051402, 11 pages. ISSN: 0094-9930.
- Potter, C., Y. Tian, G. Walker, C. McCoy, P. Hornsby, C. Donnelly, D. S. Jones and G. P. Andrews. May 2015. Novel Supercritical Carbon Dioxide Impregnation Technique for the Production of Amorphous Solid Drug Dispersions: A Comparison to Hot Melt Extrusion. *Molecular Pharmaceutics*, 12 (5), pp. 1377-1390. ISSN: 1543-8384.
- Ray, D., A. J. Comer, J. Lyons, W. Obande, D. Jones, R. M. O'Higgins and M. A. McCarthy. March 2015. Fracture Toughness of Carbon Fiber/Polyether Ether Ketone Composites Manufactured by Autoclave and Laser-Assisted Automated Tape Placement. *Journal of Applied Polymer Science*, 132 (11), Article Number 41643, 10 pages. On-line ISSN: 1097-4628.
- Richardson, D., S. Kingston and F. M. F. Rhen. November 2015. Synthesis and Characterization of Ni-Fe-B Nanotubes. *IEEE Transactions on Magnetics*, 51 (11), Article 2300504, 4 pages. ISSN: 0018-9464.
- Richardson, D. and F. M. F. Rhen. November 2015. Increasing the Magnetization of Electrolessly Deposited Ni-B Nanotubes. *IEEE Transactions on Magnetics*, 51 (11), Article 2301504, 4 pages. ISSN: 0018-9464.
- Robinson, J. and W. Redington. July 2015. The Influence of Alloy Composition on Residual Stresses in Heat Treated Aluminium Alloys. *Materials Characterization*, 105, pp. 47-55. ISSN: 1044-5803.
- Robinson, J. S., P. J. Tiernan and J. F. Kelleher. March 2015. Effect of Post-quench Delay on Stress Relieving by Cold Compression for the Aluminium Alloy 7050. *Materials Science and Technology*, 31 (4), pp. 409-417. ISSN: 0267-0836.
- Salameh, Y., A. B. Albadarin, S. Allen, G. M. Walker and M. N. M. Ahmad. January 2015. Arsenic (III,V) Adsorption onto Charred Dolomite: Charring Optimization and Batch Studies. *Chemical Engineering Journal*, 259, pp. 663-671. ISSN: 1385-8947.
- Sang, Y. C., A. B. Albadarin, A. H. Al-Muhtaseb, C. Mangwandi, J. N. McCracken, S. E. J. Bell and G. M. Walker. April 2015. Properties of Super-hydrophobic Copper and Stainless Steel Meshes: Applications in Controllable Water Permeation and Organic Solvents/Water Separation. *Applied Surface Science*, 335, pp. 107-114. ISSN: 0169-4332.

Scott, H. S., A. Bajpai, K.-J. Chen, T. Pham, B. Space, J. J. Perry and M. J. Zaworotko. October 2015. Novel Mode of 2-fold Interpenetration Observed in a Primitive Cubic Network of Formula $[\text{Ni}(1,2\text{-bis}(4\text{-pyridyl)acetylene})_2(\text{Cr}_2\text{O}_7)]_n$. *Chemical Communications*, 51 (80), pp. 14832-14835. ISSN: 1359-7345.

Sheikh, S., C. Blaszykowski, R. Nolan, D. Thompson and M. Thompson. January 2015. On the Hydration of Subnanometric Antifouling Organosilane Adlayers: A. Molecular Dynamics Simulation. *Journal of Colloid and Interface Science*, 437, pp. 197-204. ISSN: 0021-9797.

Singh, S. and K. M. Ryan. August 2015. Occurrence of Polytypism in Compound Colloidal Metal Chalcogenide Nanocrystals, Opportunities and Challenges. *The Journal of Physical Chemistry Letters*, 6 (16), pp. 3141-3148. On-line ISSN: 1948-7185.

Singh, S., P. Liu, A. Singh, C. Coughlan, J. Wang, M. Lusi and K. M. Ryan. July 2015. Colloidal $\text{Cu}_2\text{ZnSn}(\text{SSe})_4$ (CZTSSe) Nanocrystals: Shape and Crystal Phase Control to Form Dots, Arrows, Ellipsoids and Rods. *Chemistry of Materials*, 27 (13), pp. 4742-4748. ISSN: 0897-4756.

Singh, A., C. Coughlan, D. J. Milliron and K. M. Ryan. March 2015. Solution Synthesis and Assembly of Wurtzite-derived Cu-In-Zn-S Nanorods with Tunable Composition and Band Gap. *Chemistry of Materials*, 27 (5), pp. 1517-1523. ISSN: 0897-4756.

Singh, B., B. Seddon, E. Dempsey, W. Redington and C. Dickinson. January 2015. Porous Core-shell Platinum-silver Nanocatalyst for the Electrooxidation of Methanol. *Electroanalysis*, 27 (1), pp. 135-143. ISSN: 1040-0397.

Smolentseva, E., V. V. Costa, R. F. Cotta, O. Simakova, S. Beloshapkin, E. V. Gusevskaya and A. Simakov. March 2015. Aerobic Oxidative Esterification of Benzyl Alcohol and Acetaldehyde Over Gold Supported on Nanostructured Ceria-Alumina Mixed Oxides. *ChemCatChem*, 7 (6), pp. 1011-1017. On-line ISSN: 1867-3899.

Sommer, S. G., M. Hjorth, J. J. Leahy, K. Zhu, W. Christel, C. G. Sørensen and Sutaryo. January 2015. Pig Slurry Characteristics, Nutrient Balance and Biogas Production as Affected by Separation and Acidification. *Journal of Agricultural Science*, 153 (1), pp. 177-191. ISSN: 0021-8596.

Stewart, A. J., E. J. O'Reilly, R. D. Moriarty, P. Bertoncello, T. E. Keyes, R. J. Forster and L. Dennany. March 2015. A Cholesterol Biosensor Based on the NIR Electrogenerated-chemiluminescence (ECL) of Water-soluble CdSeTe/ZnS Quantum Dots. *Electrochimica Acta*, 157, pp. 8-14. ISSN: 0013-4686.

Sun, Z., H. M. B. Harris, A. McCann, C. Guo, S. Argimón, W. Zhang, X. Yang, I. B. Jeffrey, J. C. Cooney, T. F. Kagawa, W. Liu, Y. Song, E. Salvetti, A. Wrobel, P. Rasinkangas, J. Parkhill, M. C. Rea, O. O'Sullivan, J. Ritari, F. P. Douillard, R. P. Ross, R. Yang, A. E. Briner, G. E. Felis, W. M. de Vos, R. Barrangou, T. R. Klaenhammer, P. W. Caufield, Y. Cui, H. Zhang and P. W. O'Toole. September 2015. Expanding the Biotechnology Potential of Lactobacilli Through Comparative Genomics of 213 Strains and Associated Genera. *Nature Communications*, 6, Article 8322, 13 pages. On-line ISSN: 2041-1723.

Thompson, D., J. Liao, M. Nolan, A. J. Quinn, C. A. Nijhuis, C. O'Dwyer, P. N. Nirmalraj, C. Schönenberger and M. Calame. May 2015. Formation Mechanism of Metal-Molecule-Metal Junctions: Molecule-Assisted Migration on Metal Defects. *The Journal of Physical Chemistry C*, 119 (19), pp. 19438-19451. ISSN: 1932-7447.

Tierney, T., Y. Guo, S. Beloshapkin, Å. C. Rasmuson and S. P. Hudson. November 2015. Investigation of the Particle Growth of Fenofibrate Following Antisolvent Precipitation and Freeze-Drying. *Crystal Growth and Design*, 15 (11), pp. 5213-5222. ISSN: 1528-7483.

Tiryakioğlu, M. and J. S. Robinson. August 2015. On the Representative Strain in Vickers Hardness Testing of 7010 Aluminum Alloy. *Materials Science and Engineering A*, 641, pp. 231-236. ISSN: 0921-5093.

Tiryakioğlu, M., J. S. Robinson, M. A. Salazar-Guapuriche, Y. Y. Zhao and P. D. Eason. April 2015. Hardness-strength Relationships in the Aluminum Alloy 7010. *Materials Science and Engineering A*, 631, pp. 196-200. ISSN: 0921-5093.

Tobin, E. F., O. Rohr, D. Raps, W. Willemse, P. Norman and T. M. Young. April 2015. Surface Topography Parameters as a Correlation Factor for Liquid Droplet Erosion Test Facilities. *Wear*, 328-329, pp. 318-328. ISSN: 0043-1648.

Tofail, S. A. M., A. A. Gandhi, M. Gregor and J. Bauer. March 2015. Electrical Properties of Hydroxyapatite. *Pure and Applied Chemistry*, 87 (3), pp. 221-229. ISSN: 0033-4545.

Tomov, R. I., M. Krauz, A. Tluczek, R. Kluczowski, V. V. Krishnan, K. Balasubramanian, R. V. Kumar and B. A. Glowacki. September 2015. Vacuum-sintered Stainless Steel Porous Supports for Inkjet Printing of Functional SOFC Coatings. *Materials for Renewable and Sustainable Energy*, 4 (3), Article 14, 11 pages. ISSN: 2194-1459.

Tranca, D. E., S. G. Stanciu, R. Hristu, C. Stoichita, S. A. M. Tofail and G. A. Stanciu. July 2015. High-resolution Quantitative Determination of Dielectric Function by Using Scattering Scanning Near-field Optical Microscopy. *Scientific Reports*, 5, Article 11876, 9 pages. On-line ISSN: 2045-2322.

Wang, J-J., P. Liu and K. M. Ryan. September 2015. A Facile Phosphine-free Colloidal Synthesis of Cu_2SnS_3 and $\text{Cu}_2\text{ZnSnS}_4$ Nanorods with a Controllable Aspect Ratio. *ChemComm.*, 51 (72), pp. 13810-13813. ISSN: 1359-7345.

Weidt, D. and L. Figiel. August 2015. Effect of CNT Waviness and van der Waals Interaction on the Nonlinear Compressive Behaviour of Epoxy/CNT Nanocomposites. *Composites Science and Technology*, 115, pp. 52-59. ISSN: 0266-3538.

Witt, M. K., T. F. O'Dwyer and G. Walsh. June 2015. Minimization of Phosphorous in the Fermentation Media of *Escherichia coli* Producing a Model Recombinant Protein. *International Journal of Environmental Science and Technology*, 12 (6), pp. 2035-2042. ISSN: 1735-1472.

Woźniak, M. and B. A. Glowacki. February 2015. Electromagnetically Assisted Densification of Copper-Sheeted In Situ MgB_2/Cu Wires. *Journal of Superconductivity and Novel Magnetism*, 28 (2), pp. 419-423. ISSN: 1557-1939.

Wnetrzak, R., D. J. M. Hayes, L. S. Jensen, J. J. Leahy and W. Kwapinski. June 2015. Determination of the Higher Heating Value of Pig Manure. *Waste and Biomass Valorization*, 6 (3), pp. 327-333. ISSN: 1877-2641.

Wren, A. W., P. Hassanzadeh, L. M. Placek, T. J. Keenan, A. Coughlan, L. R. Boutelle and M. R. Towler. August 2015. Silver Nanoparticle Coated Bioactive Glasses – Composites with Dex/CMC Hydrogels: Characterization, Solubility, and In Vitro Biological Studies. *Macromolecular Bioscience*, 15 (8), pp. 1146-1158. ISSN: 1616-5195.

Wren, A. W., A. Coughlan, C. M. Smith, S. P. Hudson, F. R. Laffir and M. R. Towler. February 2015. Investigating the Solubility and Cytocompatibility of $\text{CaO-Na}_2\text{O-SiO}_2/\text{TiO}_2$ Bioactive Glasses. *Journal of Biomedical Materials Research Part A*, 103 (2), pp. 709-720. ISSN: 1549-3296.

Xiao, X. and E. Magner. September 2015. A Biofuel Cell in Non-aqueous Solution. *ChemComm.*, 51 (70), pp. 13478-13480. ISSN: 1359-7345.

- Yang, H. and Å. C. Rasmuson. January 2015. Phase Equilibrium and Mechanisms of Crystallization in Liquid-liquid Phase Separating System. *Fluid Phase Equilibria*, 385, pp. 120-128. ISSN: 0378-3812.
- Yatongchai, C., L. M. Placek, D. J. Curran, M. R. Towler and A. W. Wren. November 2015. Investigating the Addition of SiO₂-CaO-ZnO-Na₂O-TiO₂ Bioactive Glass to Hydroxyapatite: Characterization, Mechanical Properties and Bioactivity. *Journal of Biomaterials Applications*, 30 (5), pp. 495-511. ISSN: 0885-3282.
- Yaqub, M., S. Imar, F. R. Laffir, G. Armstrong and T. McCormac. January 2015. Investigations into the Electrochemical, Surface, and Electrocatalytic Properties of the Surface-immobilized Polyoxometalate, TBA₃K[SiW₁₀O₃₆(PhPO)₂]. *ACS Applied Materials and Interfaces*, 7 (2), pp. 1046-1056. ISSN: 1944-8244.
- Yazdani Nezhad, H. and N. P. O'Dowd. April 2015. Creep Relaxation in the Presence of Residual Stress. *Engineering Fracture Mechanics*, 138, pp. 250-264. ISSN: 0013-7944.
- Yazdani Nezhad, H., F. Merwick, R. M. Frizzell and C. T. McCarthy. January 2015. Numerical Analysis of Low-velocity Rigid-body Impact Response of Composite Panels. *International Journal of Crashworthiness*, 20 (1), pp. 27-43. ISSN: 1358-8265.
- Yuan, L., D. Thompson, L. Cao, N. Nerngchangnong and C. A. Nijhuis. August 2015. One Carbon Matters: The Origin and Reversal of Odd-Even Effects in Molecular Diodes with Self-Assembled Monolayers of Ferrocenyl-Alkanethiolates. *The Journal of Physical Chemistry C*, 119 (31), pp. 17910-17919. ISSN: 1932-7447.
- Yuan, L., N. Nerngchangnong, L. Cao, H. Hamoudi, E. del Barco, M. Roemer, R. K. Sriramula, D. Thompson and C. A. Nijhuis. March 2015. Controlling the Direction of Rectification in a Molecular Diode. *Nature Communications*, 6, Article 6324. On-line ISSN: 2041-1723.
- Zacharska, M., O. Yu. Podyacheva, L. S. Kibis, A. I. Boronin, B. V. Senkovskiy, E. Yu. Gerasimov, O. P. Taran, A. B. Ayusheev, V. N. Parmon, J. J. Leahy and D. A. Bulushev. September 2015. Ruthenium Clusters on Carbon Nanofibers for Formic Acid Decomposition: Effect of Doping the Support with Nitrogen. *ChemCatChem*, 7 (18), pp. 2910-2917. ISSN: 1867-3880.
- Zeimaran, E., S. Pourshahrestani, I. Djordjevic, B. Pinguan-Murphy, N. A. Kadri and M. R. Towler. August 2015. Bioactive Glass Reinforced Elastomer Composites for Skeletal Regeneration: A Review. *Materials Science and Engineering C*, 53, pp. 175-188. ISSN: 0928-4931.
- Zeimaran, E., S. Pourshahrestani, B. Pinguan-Murphy, N. Adib Kadri, H. A. Rothan, R. Yusof, M. R. Towler and I. Djordjevic. March 2015. Fabrication and Characterization of Poly(octanediol citrate)/Gallium-containing Bioglass Microcomposite Scaffolds. *Journal of Materials Science*, 50 (5), pp. 2189-2201. ISSN: 0022-2461.
- Zhang, S-Y., D. Li., D. Guo, H. Zhang, W. Shi, P. Cheng, L. Wojtas and M. J. Zaworotko. December 2015. Synthesis of a Chiral Crystal Form of MOF-5, CMOF-5, by Chiral Induction. *Journal of the American Chemical Society*, 137 (49), pp. 15406-15409. ISSN: 0002-7863.
- Zhang, S-Y., L. Wojtas and M. J. Zaworotko. September 2015. Structural Insight into Guest Binding Sites in a Porous Homochiral Metal-Organic Material. *Journal of the American Chemical Society*, 137 (37), pp. 12045-12049. ISSN: 0002-7863.
- Zhang, S-Y., W. Shi, P. Cheng and M. J. Zaworotko. September 2015. A Mixed-Crystal Lanthanide Zeolite-like Metal-Organic Framework as a Fluorescent Indicator for Lysophosphatidic Acid, A Cancer Biomarker. *Journal of the American Chemical Society*, 137 (38), pp. 12203-12206. ISSN: 0002-7863.

Zhang, S., H. Chen and Å. C. Rasmuson. June 2015. Thermodynamics and Crystallization of a Theophylline-salicylic Acid Cocrystal. *CrystEngComm*, 17 (22), pp. 4125-4135. ISSN: 1466-8033.

Zhang, Z., W-Y Gao, L. Wojtas, Z. Zhang and M. J. Zaworotko. June 2015. A New Family of Anionic Organic-inorganic Hybrid Doughnut-like Nanostructures. *ChemComm*, 51 (44), pp. 9223-9226. ISSN: 1359-7345.

Zhou, Y., H. Yazdani-Nezhad, C. Hou, X. Wan, C. T. McCarthy and M. A. McCarthy. November 2015. A Three Dimensional Implicit Finite Element Damage Model and Its Application to Single-lap Multi-bolt Composite Joints with Variable Clearance. *Composite Structures*, 131, pp. 1060-1072. ISSN: 0263-8223.

Zhu, L., Y. Dong, S. Hampshire, S. Cerneaux and L. Winnubst. February 2015. Waste-to-Resource Preparation of a Porous Ceramic Membrane Support Featuring Elongated Mullite Whiskers with Enhanced Porosity and Permeance. *Journal of the European Ceramic Society*, 35 (2), pp. 711-721. ISSN: 0955-2219.

KEYNOTE AND INVITED LECTURES

Hampshire, S. 2015. Silicon Nitride and Related Ceramics. *Belgian Ceramic Society Annual Meeting*, Mons, Belgium, 26 October 2015. Oral presentation (invited).

Hampshire, S. 2015. Bio-glasses and Glass-ceramics. *ECerS Summer School 2015: Ceramic and Glass Science and Technology, Application to Bioceramics and Bioglasses*, Madrid, Spain, 17-19 June 2015. Oral presentation (invited).

Hampshire, S. 2015. Bioactive Oxynitride Glasses for a Better Life. *8th Advanced Research Workshop, Engineering Ceramics 2015, Materials for Better Life*, Smolenice, Slovakia, May 2015. Oral presentation (invited).

Mealey, D., **J. Zeglinski**, D. Khamar and Å. C. Rasmuson. 2015. Influence of Solvent on Crystal Nucleation of Risperidone. *Faraday Discussions Conference 'Nucleation - A Transition State to the Directed Assembly of Materials'*, University of Leeds, United Kingdom, 30 March-1 April 2015. Oral presentation (invited).

Stanley, W. F., A. J. Comer, D. Roy, B. Saz-Orozco, P. Hammond, G. Clancy, W. Obande and P. T. McGrail. 2015. Benzoxazines as High Temperature Composite Matrices. *Thermosets 2015: From Monomers to Components*, Berlin, Germany, 16-18 September 2015. Oral presentation (plenary lecture).

J. Zeglinski, Å. C. Rasmuson, D. Mealey, M. Kuhs and D. Khamar. 2015. Influence of Solvent and the Memory of Solution Effect in Crystal Nucleation of Pharmaceutical Compounds. *CECAM Workshop*, University College Dublin, 12 June 2015. Oral presentation (invited).

CONFERENCE PRESENTATIONS

Abdallah, N. and E. Magner. 2015. Sequential Immobilization of Catalysts for Application in Cascade Systems (Epoxidation of Alkene). *Biotrans 2015*, Vienna, Austria, 26-30 July 2015. Poster presentation.

Abdallah, N. and E. Magner. 2015. Immobilization of Catalysts and Their Applications. *67th Irish Universities Chemistry Research Colloquium*, Maynooth, Dublin, 15-26 June 2015. Oral presentation.

Abdallah, N. and E. Magner. 2015. Sequential Immobilization of Catalysts for Application in Cascade Reactions. *Transam 2.0 – Chiral Amines Through (Bio)Catalysis*, Greifswald, Germany, 3-6 March 2015. Speed talk and poster presentation.

Armstrong, G., A. Elrikh, S. Goutier and A. Vardelle. 2015. Our Experience of Thesis Co-supervision. Campus France/Irish Universities Association Franco-Irish Forum for Doctoral Studies and Internationalisation, Trinity College Dublin Innovation Academy, 25 June 2015. Oral/round-table forum (invited).

Bodnar, K., S. P. Hudson and Å. C. Rasmuson. 2015. Controlling the Dissolution Properties of Mefenamic Acid. *46th British Association of Crystal Growth (BACG) Annual Conference*, Queen Mary University, London, United Kingdom, 21-23 June 2015. Poster presentation.

Carucci, C., P. Haltenort, M. Salazar, A. Salis and E. Magner. 2015. Hofmeister Effects: the Supporting Electrolyte Affects the Response of Glucose Oxidase. *Biotrans 2015*, Vienna, Austria, 26-30 July 2015. Poster presentation.

Davis, M. 2015. Amorphous Solid Dispersions of BCS Class II Drugs: A Rational Approach to Solvent and Polymer Selection. *7th International Granulation Workshop*, Sheffield, 1-3 July 2015. Oral presentation.

Davis, M. 2015. Characterisation of Spray Drying Processes using in-situ Raman Spectroscopy. *EUPAT7, Seventh pan-European Science Conference on QbD and PAT Sciences*, Graz, Austria, 18-19 May 2015. Poster presentation.

Elrikh, A., S. Goutier, A. Vardelle and G. Armstrong. 2015. Improving the Adhesion of Wear Resistant Coatings on Aerospace Polymer Composites. *American Society for Metals International Thermal Spray Conference 2015*, Long Beach, California, 11-14 May 2015. Oral presentation.

Haq, E., S. Patole, J. K. Hobbs, G. J. Leggett, C. Hunter, Z. Liu, C. J. Roberts, J. R. Weaver and J. Micklefield. 2015. Nanoscale Surface Modifications of Biocompatible Surfaces. *EAMMD Workshop 2015, Electrically Active Materials for Medical Devices*, University of Limerick, Limerick, 8-10 June 2015. Poster presentation.

Kailas, L. 2015. Nano-bio-chemical Investigation by Integrated SPM-TERS-SNOM-LSM. *Joint ISCA-INSPIRE Workshop on Electrically Active Materials for Medical Devices (EAMMD)*, University of Limerick, 8-10 June 2015. Oral presentation.

Karimijafari, M., Y. Guo, K. Kowal, K. O'Sullivan, A. Maher, A. Gandhi and S. A. M. Tofail. 2015. Electron Backscattering Diffraction in Ferroelectric Ceramics. *EAMMD Workshop 2015, Electrically Active Materials for Medical Devices*, University of Limerick, Limerick, 8-10 June 2015. Poster presentation.

McKeown, C. and F. M. F. Rhen. 2015. Enhanced Catalytic Activity of Fe_xPt_{100-x} Thin Films for Fuel Cells. *NanoEnergy 2015: International Conference on Nanotechnology, Nanomaterials & Thin Films for Energy Applications*, Manchester, England, 1-3 June 2015. Oral presentation.

McKeown, C. and F. M. F. Rhen. 2015. Anomalous Hall Effect in Electrolessly-deposited Ni-B Thin Films. IOP Ireland and Seagate Meeting: Thin Film Fabrication and Characterisation Techniques, and Their Application in Recording Head Wafer Manufacturing, Derry, Northern Ireland, 11-12 June 2015. Poster presentation.

McKeown, C. and F. M. F. Rhen. 2015. Reducing the Cost of Hydrogen Fuel Cells. MSSSI Research Day, Limerick, 25 June 2015. Oral presentation.

Nash, N. H., T. M. Young and W. F. Stanley. 2015. The Influence of a Thermoplastic Toughening Interlayer and Hydrothermal Conditioning on the Mode-I and -II Interlaminar Fracture Toughness of Carbon/Benzoxazine Composites. *Thermosets 2015: From Monomers to Components*, Berlin, Germany, 16-18 September 2015. Oral presentation.

Obande, W. and W. Stanley. 2015. Characterisation of 3D Fibre Reinforced Composites. *Thermosets 2015*, Berlin, Germany, 16-18 September 2015. Oral presentation.

Roy, D., S. Sain, S. Sengupta, A. Kar and A. Mukhopadhyay. 2015. Biodegradation Behaviour of Cellulose Reinforced Tung Oil Modified PMMA Composite. *Thermosets 2015: From Monomers to Components*, Berlin, Germany, 16-18 September 2015. Oral presentation.

Salazar-Alvarez, M., M. N. Labour, M. R. Noor, T. Soulimane, E. Magner and S. A. M. Tofail. 2015. Interaction of Bone Proteins and Cells with Electrostatic Domains. *Joint ISCA-INSPIRE Workshop on Electrically Active Materials for Medical Devices (EAMMD)*, University of Limerick, 8-10 June 2015. Oral presentation.

Siepenkoetter, T. and E. Magner. 2015. Nanoporous Gold and Their Application in Protein Electrochemistry. *Bioelectrochemical Society's XXII International Symposium on Bioelectrochemistry and Bioenergetics*, Malmoe, Sweden, 14-18 June 2015. Poster presentation.

Tierney, T., **S. Behan**, M. C. Rea, E. O'Shea, R. P. Ross, C. Hill, J. Cooney and S. P. Hudson. 2015. Protective Matrices for Bacteriocins. *Wellcome Trust 'Exploring Human Host-Microbiome Interactions in Health and Disease'*, Wellcome Trust Genome Campus, Hinxton, Cambridge, United Kingdom, 29 June-1 July 2015. Oral presentation.

Tierney, T., Å. C. Rasmuson and S. P. Hudson. 2015. An Investigation into the Particle Growth Pathway of Precipitated Fenofibrate. *46th British Association of Crystal Growth (BACG) Annual Conference*, London, 21-23 June 2015. Oral presentation.

Tierney, T., Å. C. Rasmuson and S. P. Hudson. 2015. An Investigation into the Particle Growth Pathway of Precipitated Fenofibrate. *European Conference on Crystal Growth (ECCG)*, Bologna, Italy, 11 September 2015. Oral presentation.

Xiao, X. and E. Magner. 2015. The Construction of Enzymatic Fuel Cells Operating in Organic Media. *Bioelectrochemical Society's XXII International Symposium on Bioelectrochemistry and Bioenergetics*, Malmoe, Sweden, 14-18 June 2015. Poster presentation.

Xiao, X. and E. Magner. 2015. The Construction of Enzymatic Fuel Cells Operating in Organic Media. *5th Annual NUI Galway-University of Limerick Alliance Research Day*, Galway, 21 April 2015. Poster presentation.

Yazdani Nezhad, H., A. Auffray, C. T. McCarthy and R. O'Higgins. 2015. Impact Damage Response of Carbon Fibre-reinforced Aerospace Composite Panels. *20th International Conference on Composite Materials*, Copenhagen, Denmark, 19-24 July 2015. Oral presentation.

Ziaee, A., D. Chovan, M. Zaworotko and S. A. M. Tofail. 2015. Theoretical Study of Adsorption in SIFSIX-3-Zn Type Porous Materials. *5th Annual NUI Galway-University of Limerick Alliance Research Day*, Galway, 21 April 2015. Plenary talk.

Ziaee, A., D. Chovan, J. J. Perry, M. Zaworotko and S. A. M. Tofail. 2015. Theoretical Optimization of Pore Size and Shape in SIFSIX-3-M Type Porous Materials. *12th International Conference on Materials Chemistry*, 20-23 July 2015. Poster presentation.

CONFERENCE PROCEEDINGS

Bangert, U., W. Pierce, C. B. Boothroyd, M. Migliorato, C. T. Pan, A. J. Harvey, D. M. Kepatsoglou and Q. M. Ramasse. 2015. Atomic-scale Insights into 1D and 2D Nano-materials. Electron Microscopy and Analysis Group Conference, EMAG2015, Manchester, England, June 2015, *Journal of Physics Conference Series*, volume 644, article number 012021. ISSN: 1742-6588.

Bourke, A., M. A. Miller, R. P. Lynch, J. S. Wainright, R. F. Savinell and D. N. Buckley. 2015. Electrode Kinetics in All-vanadium Flow Batteries: Effects of Electrochemical Treatments. ECS Transactions, 66 (8), pp. 181-211, published by the Electrochemical Society, *Symposium on Joint General Session: Batteries and Energy Storage and Fuel Cells, Electrolytes and Energy Conversion, 227th ECS Meeting*, Chicago, USA, 24-28 May 2015. ISBN: 978-1-607-68539-5.

Bourke, A., R. P. Lynch and D. N. Buckley. 2015. Effect of Polarization Treatment on VII/VIII and VIV/VV Kinetics at Carbon Electrodes. ECS Transactions, 64 (21), pp. 1-17, published by the Electrochemical Society, *Symposium on Electrochemical Interfaces in Energy Storage Systems, ECS and SMEQ Joint International Meeting*, Cancun, Mexico, 5-9 October 2014. ISBN: 978-1-607-68539-5.

Buckley, D. N., R. P. Lynch, N. Quill and C. O'Dwyer. 2015. Propagation of Nanopores and Formation of Nanoporous Domains During Anodization of n-InP in KOH. *ECS Transactions*, 69 (14), pp. 17-32, published by the Electrochemical Society, *Symposium on State-of-the-Art Program on Compound Semiconductors 58, SOTAPOCS 2015, 228th ECS Meeting*, 11-15 October 2015. ISBN: 978-1-607-68539-5.

Golden, B., D-F. Li, P. Tiernan, S. Scully and N. P. O'Dowd. 2015. Deformation Characteristics of a High Chromium, Power Plant Steel at Elevated Temperatures. American Society of Mechanical Engineers, Pressure Vessels and Piping Division, *ASME 2015 Pressure Vessels and Piping Conference*, Boston, Massachusetts, USA, 19-23 July 2015.

Hampshire, S. 2015. Oxynitride Glasses as Grain Boundary Phases in Silicon Nitride: Correlations of Chemistry and Properties. *Advanced Processing and Manufacturing Technologies for Nanostructured and Multifunctional Materials*, volume 35, issue 6, pp. 3-13, A Collection of Papers presented at the 38th International Conference on Advanced Ceramics and Composites, 27-31 January 2014, Daytona Beach, Florida, USA, edited by T Ohji, M. Singh and S. Mathur. ISBN: 978-1-119-04035-4.

Kwapinska, M., G. Xue, A. Horvat, W. Kwapinski, L. P. L. M. Rabou and J. J. Leahy. 2015. The Effect of Equivalence Ratio on the Gasification of Torrefied and Un-Torrefied Biomass – *Miscanthus x giganteus*. *Proceedings of the 7th European Combustion Meeting 2015, ECM2015*, 30 March-2 April 2015, Budapest, Hungary. ISBN: 978-963-12-1257-0.

McNulty, D., D. N. Buckley and C. O'Dwyer. 2015. Vanadium Oxide Polycrystalline Nanorods and Ion-Exchanged Nanotubes for Enhanced Lithium Intercalation. *ECS Transactions*, 64 (22), pp. 1-12, published by the Electrochemical Society, ECS and SMEQ Joint International Meeting, Cancun, Mexico, 5-9 October 2014.

Nikolic, D. D., de Souza, B. P. and P. J. Frawley. 2015. Application of the Lagrangian CFD Approach to Modelling of Crystallization in Stirred Batch Reactors Using the Smoothed Particle Hydrodynamics Method. 12th International Symposium on Process Systems Engineering (PSE) and 25th European Symposium on Computer Aided Process Engineering (ESCAPE), Copenhagen, Denmark, 31 May-4 June 2015. *Book Series: Computer Aided Chemical Engineering*, volume 37, pp. 623-628, part A, edited by K. V. Gernaey, J. K. Huusom and R. Gani. ISBN: 978-0-444-63578-5.

Pépin, A., T. Tkaczyk, N. O'Dowd and K. Nikbin. 2015. Qualification of Reeled Mechanically Lined Pipes for Fatigue Service. *Proceedings of the 25th International Offshore and Polar Engineering Conference, ISOPE 2015*, pp. 42-51, Hawaii, USA, 21-26 June 2015. ISBN: 978-1-880-653890.

Pomeroy, M. J. 2015. Preparation and Properties of Aluminosilicate Glasses Containing N and F. *Advanced Processing and Manufacturing Technologies for Nanostructured and Multifunctional Materials*, volume 35, issue 6, pp. 15-22, A Collection of Papers presented at the 38th International Conference on Advanced Ceramics and Composites, 27-31 January 2014, Daytona Beach, Florida, USA, edited by T Ohji, M. Singh and S. Mathur. ISBN: 978-1-119-04035-4.

Quill, N., C. O'Dwyer, D. N. Buckley and R. P. Lynch. 2015. Towards Electrochemical Fabrication of Free-standing Indium Phosphide Nanofilms. *ECS Transactions*, 69 (14), pp. 33-48, published by the Electrochemical Society, *Symposium on State-of-the-Art Program on Compound Semiconductors 58, SOTAPOCS 2015, 228th ECS Meeting*, Phoenix, Arizona, USA, 11-15 October 2015. ISBN: 978-1-607-68539-5.

Quill, N., C. Petchsingh, R. P. Lynch, X. Gao, D. Oboroceanu, D. Ní Eidhin, M. O'Mahony, C. Lenihan and D. N. Buckley. 2015. Factors Affecting Spectroscopic State-of-charge Measurements of Positive and Negative Electrolytes in Vanadium Redox Flow Batteries. *ECS Transactions*, 64 (18), pp. 23-39, published by the Electrochemical Society, *Symposium on Batteries and Energy Technology Joint General Session, ECS and SMEQ Joint International Meeting*, Cancun, Mexico, 5-9 October 2014. ISBN: 978-1-607-68539-5.

Rhen, F. M. F., S. Belochapkin and F. P. Missell. 2015. Structure and Magnetic Properties of Sputtered $\text{Sm}_x \text{Co}_{100-x}$ ($20 < x < 32$) Films Prepared at Low Temperatures. *Physics Procedia*, 75, pp. 1345-1352. ISSN: 1875-3892.

Richardson, D. and F. M. F. Rhen. 2015. The Diverse Nanostructure of Electroless Plated CoNiFeB Alloy: Thin Film, Nanotubes and Nanoparticles. *Physics Procedia*, 75, pp. 1158-1166. ISSN: 1875-3892.

Richardson, D and F. M. F. Rhen. 2015. Magnetic Properties of Co-B Nanostructures Prepared via Electroless Deposition. *Solid State Phenomena*, 233-234, pp. 648-652, *6th Moscow International Symposium on Magnetism, MISM 2014*, Lomonosov Moscow State University, Russia, 29 June-3 July 2014. ISBN: 978-3-038-35482-6.